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Borough of



Wolverhampton.

# REPORT

ON THE

## Health of the Borough

OF

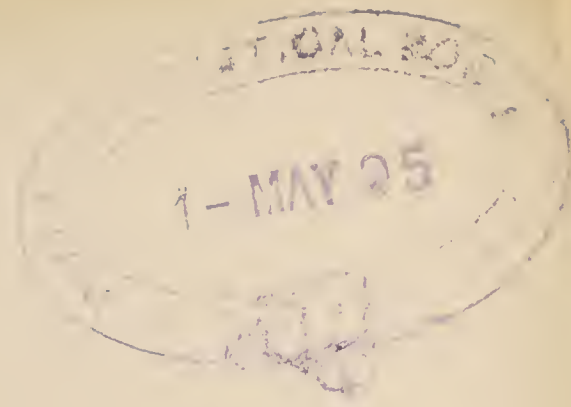
## WOLVERHAMPTON,

FOR THE YEAR 1887.

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OF

WOLVERHAMPTON,

FOR THE YEAR 1887,


BY

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MEDICAL OFFICER OF HEALTH.



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# MEDICAL OFFICER'S REPORT,

## 1887.

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### Prevalence and Prevention of Infectious Disease.

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WE have this year, as far as we can judge by cases heard of by us, been altogether free from Small-pox ; one case only was reported as such, and, being suspicious, was at once isolated in one of the rooms in the Administrative Block at the Borough Hospital. It eventually proved to be only a case of exceptionally severe Chicken-pox, which was very prevalent at the time (Midsummer).

*Measles.*—We had a severe epidemic of Measles during the first three quarters of 1884, after only one year and three quarters remission a still severer epidemic commenced with the Second Quarter of 1886, and lasted into the First Quarter of the present year ; during the rest of the year a considerable number of cases kept occurring ; the majority of these cases were in the East Sub-District, and nearly all the deaths, see tables 1 and 3. The actual epidemic during the three Quarters it lasted caused 130 deaths, more than Scarlet Fever has caused during the last five years. Of these deaths 64 were in the East, and 66 in the West Sub-District ; the total cases during the three Quarters were 1272, 425 being East, and 847 West ; this disproportion of cases, and the enormously greater fatality in the East have been already explained in last year's Report.

*Scarlet Fever.*—It will be well to notice the history of Scarlet Fever in each Sub-District separately. During 1886 the East remained singularly free, the number of cases reported Quarterly being 11, 6, 2, 0 ; the First Quarter this year only one case was reported, and that was a doubtful one ; in the Second Quarter one case was reported and removed to the Borough Hospital ; thus for Three Quarters we had only two cases, one being doubtful ; the Third Quarter

this extraordinary remission ceased, towards the end of July we heard of several cases, two in one house and three in another, and about August 23rd several more cases under grave circumstances were found, it is worth while to give a more detailed account of these :—

*August 23rd :—*

Case 29 ; M. J. R., girl, æt 7 ; *n* Moore Street, been ill a month ago, seen by one of our Inspectors on July 27th, who asked the Medical attendant what was the matter, was told it was nothing infectious ; I found the child peeling freely on August 24th, then removed to Borough Hospital.

Case 28 ; I. H., boy, æt 5 ; *x* Willenhall Road, said to have been at *n* Moore Street (case 29). Child very ill, on a squab, in a huckster's shop, the only downstairs room, two small rooms upstairs ; sweets sold here ; Board Schools opposite side of the road ; I found a neighbour in the shop, her child being in a perambulator at the door, round which several other neighbours were collected. Parents and six other children from 14 years to 8 weeks old live here ; mother refused to allow child to be removed, took up the tongs and threatened violence. Removed under a Magistrates' order ; a few weeks after mother told one of the Inspectors we might keep the little boy altogether.

Case 30 ; A. S., girl, æt 7 ; *r* Moore Street, been ill about fourteen days ago ; has been near case 29 ; no Medical attendant, was taken to a chemist ; when Inspector called was out with her father's dinner ; I called on the following day and found her freely peeling ; a sister was then attending school. Removed to Borough Hospital.

Cases 31, 32, 33, and 34 ; 4 girls, E. H., æt 9 ; L. H., æt 10 ; C. H. H., æt 7, and M. M. H., æt 3 ; *h* Wood Street. E. H., ill on the 10th inst., not reported ; L. H., and C. H. H., both taken ill on the 22nd inst. ; on the 24th inst. I found M. M. H. had also taken the fever. E. H. was at once removed to the Borough Hospital, she being freely peeling ; the others were removed a few days later.

*August 29th :—*

Case 40 ; J. M., girl, æt 6 ; *a* Court, Moore Street, ill six weeks ago, now just done peeling.

*August 31st :—*

Case 42 ; J. B., boy, æt 8 ; *s* St. Matthew Street, been ill about 12 days ; same school as some of the previous cases, 6 other children here. Removed to Borough Hospital.

Case 43 ; A. H., girl, æt 8 ; *e* Court, Moore Street, been ill a month ago, now attending school (same school as cases 40, 42, and 30), peeling freely on legs ; only one bedroom here, 4 other children. Removed to Borough Hospital.

*September 1st :—*

Case 50 ; *k* Court, Bilston Road, a little girl said to have had Measles some weeks ago ; was taken to General Hospital on account of fresh illness, and then found peeling.

*September 9th :—*

Case 65 ; E. C., girl, æt 6 ; Willenhall Road, been ill 7 weeks, sore throat and rash, no doctor ; after a week, being cautioned about keeping child from school, the mother sent her, she attended regularly since, and peeled while doing so ; same school as already mentioned above.

Cases 66, 67, 68, 69, 70 ; E. V., and G. V., 2 girls, æt 8, and 2 ; F. V., D. V., Fr. V., 3 boys, æt 10, 5, and 3 ; Willenhall Road. E. V., ill 6 or 7 weeks ago, others, at few days interval, one by one after ; the 2 last taken ill still peeling ; plenty



opportunity for isolation here, but not the least attempt at doing so, quite ignorant of the illness ; only the first case seen by a doctor ; the two eldest had attended the same school already referred to.

Then follow a few cases without evident association with this outbreak, except 4 who were connected with the same school ; 2 others are also worth mentioning :—

Case 89 ; a boy, æt 10½, was playing about the streets peeling freely a week after he was taken ill.

Case 119 : boy, æt 17 months, too ill to move when first heard of, so we gave the strictest caution both to parents and neighbours ; on my revisiting 4 days later to see if it could then be moved, found a neighbour in the room with her child in her arms.

Of the 37 cases heard of in the East Sub-District this Quarter 19 were removed to the Borough Hospital, these were all the cases that needed removal when heard of, many had already completed their infectious stage, and a few were capable of home isolation ; the good effect of these removals was apparent next Quarter, when we had only 13 cases reported, 3 of these were cases of old illness and associated with last Quarter's outbreak, the others were new cases, 8 connected with those last Quarter, 2 apparently not so ; 7 were removed to the Borough Hospital, being all the cases needing it. The following is a typical instance of how infection is encouraged ; when our Inspector was at one house where there were two cases of Scarlet Fever a neighbour was visiting there, on being remonstrated with she replied, " where the Lord willed He'd send it," six days later one of her own children had the fever. It is very exceptionally that the least care of any kind is observed before our Inspector's visit.

In the West Sub-District there never was so complete a remission of Scarlet Fever as that experienced in the East. During the last two quarters of 1886 there were 4 and 6 cases reported, only one case in each quarter being isolated at Hospital. Table 1 shows that the first two quarters this year we had 12 and 16 cases ; of these, 2 and 3 respectively, were isolated at Hospital. The following are some of the cases that remained at home, their homes being such as admitted of some isolation (never availed of), so that we could not press their removal to Hospital :—

*First Quarter :—*

Cases 117, 118 ; *k* Wullon Street, found playing in the street when peeling freely, mother had been previously warned.

Cases 126, 127, 128, 129 ; *g* Dunstall Road, 126 taken ill on February 12th, others allowed to attend school until 127 fell ill on the 19th, this being a school where we had several cases amongst the children just after ; 128 taken ill on February 26th ; 129 on March 5th ; on April 4th, the whole family moved into a house in a neighbouring street.

Cases 137, 138, 139 ; *e* Coleman Street, cases from same school referred to last ; here our offer of disinfection was at first refused, the mother " didn't wish the neighbours to know everything she had in the house."

*Second Quarter. :—*

Cases 5 and 6; *n* Clarence Street, on the neighbour at number *m* hearing these children were ill she said it was Scarlet Fever, for hers had had it; she had allowed her children to play with these, and given no warning of hers having been ill; case 6 died.

Cases 7 and 8; *m* Clarence Street, cases referred to in last report; the Medical attendant had told the mother to report these cases to us, she kept the illness concealed, and allowed the children to play with the little ones next door, both of whom took the fever, one dying as above-mentioned; on the Inspectors and myself calling at No. *m*, we were treated with gross insolence by the mother: I subsequently wrote to the father explaining the risks to him; his wife after this sent a dress to a lady for whom she was then making it, and the lady took scarlet fever; this case was the grossest instance of wilful negligence I have met, involving as it did the illness of 3 other persons and the death of one; I mention it as shewing the degree to which this can reach in a person who would be considered fairly intelligent. A third child was taken ill about a week later at No. *m*.

These cases show how little use is made of such opportunities as do exist for home isolation; with this conduct going on, and only 5 cases out of 28 removed to Hospital during the 2 Quarters, it is not suprising that a more extended outbreak took place, and 40 cases were reported in the Third Quarter; these cases were nearly all in the same vicinity, about the Whitmore Reans. I add notices of some of them, they illustrate both the deficiency of home isolation, and the negligence displayed, and also how much too late we hear of these cases to be of any use.

Case 1.—July 4th: *p* Sweetman Street, some precautions are being taken.

Case 51.—Sept. 2nd; *p* Sweetman Street, was taken ill at end of July, mother said to-day: "Oh, he is all right, he is playing in the street." He was then peeling freely, and his brother (Case 1) was with him, and was dropsical.

Case 37.—Aug. 24th; *x* Chester Street, infection from Cases 1 and 51 above.

Cases 53, 54, 55, 56, 57, 58.—Sept. 2nd; *x* Coleman Street; ill about 5 or 6 weeks ago, all out in street now, 3 of them found peeling freely.

Cases 59, 60, 61, 62, 63.—Sept. 2; *k* Gibb-street; these children had been at *x* Coleman-street; ill 3 or 4 weeks ago; now out at play, all infectious.

Case 64.—Sept. 8th; *v* Coleman-street, taken ill day before yesterday, very severe case, the mother from No. *x* was here and had this child in her house; another child was taken ill here next quarter.

Cases 52, 71, 80, 81, 82; *r* Coleman-street, 52 was heard of on Sept. 2nd, mother then refused any information, on the others falling ill on the 10th she wanted them removed.

Case 86.—Sept. 15th; Red Lion-street, a girl æt 13, severe case, had been to visit a child ill with scarlet fever in the Wednesfield-road, and kissed it.

Cases 77 and 122; Hunter-street, 77 fell ill on Aug. 23rd, was taken to a chemist, who said it was measles, child allowed about but caught some cold and a doctor was called in, it was then peeling freely; 122, a brother, had scarlet fever on Sept. 22nd.



Of the 40 cases reported this Third Quarter in the West Sub-District, only 7 were removed to Hospital ; besides the fact, that having comfortable homes, the parents are unwilling to have their children removed, and not far-seeing, nor unselfish enough, to sacrifice present sentiment for the good of others, and their own, and their children's ultimate good, another grave hindrance to the utilization of Hospital Isolation arises from the late information we receive of cases in the West; the poorer classes readily call in the Parish Medical Officer, and it is his duty to report any infectious cases ; the better off in some cases think themselves competent to treat their sick themselves, or else they have in their own doctor, in neither case do we, as a rule, hear of the illness, except by chance ; it certainly happens more frequently than it did, that parents and friends report cases to us for the sake of our help in isolation and disinfection, but still such reports are exceptional. Amongst the records above are seen several instances of 5, and even 6, cases occurring in one family, and our only hearing of them some weeks after ; if we could have isolated the first case, the other illnesses might have been avoided. It is rather amusing to notice how ready these persons are to obtain our help, when they don't anticipate any interference with their prejudices ; thus, it is quite usual for parents to ask for disinfection of clothing or premises after the illness, which has been kept quiet, is over.

As the natural result of all this we find the Scarlet Fever, instead of dropping from 37 to 13 cases, as it did in the East, from the Third to the Fourth Quarter, rises from 40 cases to 48 in the West ; during this Fourth Quarter we effected a much greater proportion of Hospital removals (22 of the 48 cases), partly because we were able to make closer inquiries after cases, through knowing where the fever had prevailed, partly because it extended by degrees into the poorer parts of the Sub-District, about Salop Street, Brickkiln Street, and Blakenhall.

Amongst others the following are worth somewhat detailed notice :—

Cases 48, 49, 50 ; *x* Great Brickkiln-street ; M. H. æt 7, E. H. æt 3, A. H. æt 4½ ; M. H. ill 3 weeks ago, kept at home for a few days, *then sent to school* ; a little later E. H. and A. H. both fell ill ; I found all three peeling about a fortnight after ; there are four other children here who are said to have had scarlet fever some years ago ; five children attend school ; after long persuasion the mother consented to the three children being removed to hospital, but later again refused ; this is a comfortable house (4-roomed) but, with so many children about, isolation is impossible.

Cases 68, 69 ; *k* Franchise-street ; M. æt 4, W æt 1 ; M. ill 6 weeks ago, *after 4 weeks allowed back to school*, after 9 days W. taken ill, then M. kept from school again ; *many cases have since occurred in connection with this school*.

Case 80 ; *d* Chapel-street ; C. E. æt 5 ; 14 days ill, peeling freely ; 6 other children here ; parents wouldn't consent to removal, although the child wished to go ; this child attended same school as Case 68, and 2 others from here attended another school. Removed by a Magistrate's order.

The following table exhibits the cases and removals to Hospital in each Sub-District :—

QUARTERS.					1st.	2nd.	3th.	4th.	Year.
EAST	Total	Cases	...	...	*1	1	37	13	52
		Deaths	...	...	*1	...	3	1	5
	Removals	Cases	...	...	.	1	19	7	27
		Deaths	...	...	...	...	...	...	...
WEST	Total	Cases	...	...	12	16	40	48	116
		Deaths	...	...	1	1	2	7	11
	Removals	Cases	...	...	2	3	7	22	34
		Deaths	...	...	...	...	...	1	1

\*This was a doubtful case.

We see that during the year, 61 cases were isolated at the Borough Hospital, the main stress of work being during the last two Quarters, when it was at times very heavy indeed, there having been as many as 21 cases in together, and many very severe ones ; this taxed our limited accommodation, and partial arrangements to their utmost. Forty cases were discharged well, one died, and twenty remained in at the close of the year ; these have all been since discharged well. Besides these 61 cases, one case of Scarlet Fever remained in the Hospital from last year, and also went out well.

We can seldom hope to have a year as free from Scarlet Fever as this was, its comparative absence in the first Quarters being very exceptional ; so that, as a rule, we shall expect to have even more work of isolation done at the Borough Hospital than that mentioned above ; and this is not dealing with any epidemic, but endeavouring to prevent such, were an epidemic to make actual headway we have no adequate means of meeting it ; of course the importance of the isolation we do is very great, indeed this prevention of an epidemic is the most important work of the kind, and, considering the general spread<sup>d</sup> of Scarlet Fever throughout the country last Autumn, and the determined onset it made on us, I think we may conclude an epidemic was averted. But, while valuing this isolation thus highly, we must not lose sight of two important truths ; both being due to the partial state of our Hospital, which only consists of two wards in one Pavilion, and half an Administrative Block, with scanty accommodation for staff ; first, as already stated, if an epidemic of Scarlet Fever were actually to arise we could not



deal with it ; second, if another infectious disease invaded us simultaneously, we could not carry on the double isolation on our premises ; for instance, if we wished to isolate Small-pox, we should have to resign Scarlet Fever.

As regards the possibility of an actual epidemic of Scarlet Fever occurring, I believe our present accommodation would be ample to prevent it, if we had reasonable public support ; if we were informed of cases early, and our efforts to isolate them were seconded by the patient's friends in those cases where home isolation is uncertain, and if, when home isolation can be effected, it was properly carried out and continued long enough ; then we would, I believe, never exceed the limits of our present wards, and any threatening epidemic would be safely averted ; but, while we are exposed to such risks as are shown in the cases recorded above, we are liable to find on our first discovery of an outbreak, so many cases needing isolation that our wards are insufficient ; thus the outbreaks this Autumn almost went beyond our powers of dealing with them before they were detected.

The only method of dealing with a second infectious disease at present available would be to take advantage of our agreement with the General Hospital to isolate Scarlet Fever there.

The comparison of the two Sub-Districts gives the most striking proof of the great value of the Hospital Isolation ; especially if it is remembered that in almost all other respects the East is at a terrible disadvantage ; to fully estimate this matter the reports of '85 and '86 should be referred to.

We find, as before, that, no matter how great the prejudice against the Hospital may be, after actual experience of it—both parents and children are pleased ; the former are always warm in their thanks for what has been done, and the children are seldom very willing to leave. On one occasion a woman was warned not to let “ the Inspector ” know of two of her children being ill, lest they might be taken to the Hospital, she replied, “ that was exactly what she wished, as she had one in there last year, and knew how well they were cared for ” ; indeed, whenever a second case occurred (which fortunately was not often the case) in a house from which one had already been removed—the parents came and asked for removal. It is a pity that the same goodwill does not extend more readily among those who have not yet had actual experience of the Hospital.

The 168 cases were reported as follows :—By our own Inspectors, 42 ; School Board Inspectors, 21 ; School Teachers, 25 ; Parish Medical Officers, 29 ; Other Medical Men, 2 ; Parents and Friends asking for Disinfection, 2 ; Ditto reporting the illness, 11 (many of these were by the direction of the Medical Attendant) ; Registrar of Deaths, 8 ; Court Sweepers, 4 ; other sources, 24. It is very gratifying to find as many as 11 cases reported by the friends ; the School Board Officers have been a valuable help, and so have the Teachers. I am sorry to say that many of the cases reported by the latter were only in reply to requests for information, when there had already been many absences from illness ;



the information would be of infinitely greater value if sent early, before there was any extension of the disease ; we have supplied the Teachers with post cards for this purpose, but amongst their many duties they are apt to overlook the earlier absences.

*Diphtheria*.—Judging by the deaths we have had rather more than the average amount of Diphtheria, (see table 9) ; we evidently have only a small proportion of cases actually occurring reported to us, (see table 1), partly, perhaps, because it is not looked upon as so infectious as some other diseases, partly, no doubt, because many mild cases are not readily recognised.

Whether we look at the deaths or the cases the fact, noticed in last year's report, that nearly all the Diphtheria is in the West Sub-District again impresses one, (tables 1 and 3) ; there were only 3 cases in the East Sub-District, and they were all in one house—the circumstances were :—

Sept. 23rd ; at *g* Steelhouse-lane, E. D. ill with sore throat, thought to be well on 28th ; on Oct. 4th 2 sisters were taken ill, on the 8th taken to the General Hospital and died there.

No cause for these illnesses was made out. The cases in the West were as follows :—

April 14th ; Pountney-street, child æt 5, death after 6 days' illness, then reported by Registrar ; an untrapped street gully is close to the house door.

April 21st ; Frederick-street, child æt 4, death after 10 days' illness, reported by Registrar ; no cause made out.

April 23rd ; Merridale-road, adult ; abominable drainage defects.

April 26th ; Merridale-street, infant æt 2, death ; then reported by Registrar ; nothing definite made out.

July 18th ; Sweetman-street, child æt 6 ; not heard of until a week after death, nothing made out.

July 27th ; Coleman-street, boy æt 9 ; yard drains untrapped, offensive water in cellar.

August 24th ; Salop-street, 2 cases, brother and sister, ill a fortnight ago, nothing made out, except that 10 pigs and a large quantity of manure were kept on the premises, notice had been already served for their removal.

August 31st ; Coleman-street, adult, had been cleaning out his yard drains, one of which is untrapped, was taken ill after this.

Sept. 1st ; Newhampton-road, E. B. æt 7, T. B. æt 9, A. B. æt 13 ; the latter two were brought as out-patients to the General Hospital and found suffering from evident diphtheritic sequelæ, and their mother then told that E. B. had died of the "same sore throat that they had" ; this death had not been registered as diphtheria ; on having the premises examined the yard drain was found untrapped, and the cellar drain was untrapped and sewer gas flowing freely into the house through it ; the landlord stated that he had paid a bricklayer for having put in a syphon trap here.

Oct. 26th ; Penn-road, child æt 2, died after 16 days' illness, then reported by Registrar. May have been due to a defective sink drain.

I record these cases because Diphtheria illustrates more directly perhaps than any other disease—the evils we are contending with in our Inspection of Nuisance Department; evils which are too commonly disregarded until attention is drawn to them by such catastrophes as above.

*Typhoid Fever.*—Our reported cases of Typhoid Fever are as unreliable as those of Diphtheria, as an indication of its prevalence; of 32 cases, 14 were deaths, this high ratio shows there must be many unrecorded cases. Our mortality has been a little above the average, (see table 9); but there has been no appearance of any outbreak of the disease; nearly all the cases being separate ones. In the first Quarter there were 2 cases, both in the West, one an infant of 13 months, had had measles 5 weeks before death, rather a doubtful case I think; the second was at a house where the closet emptied into a cesspit, and the water was from a well, and found contaminated with sewage. In the second Quarter there was 1 case in each Sub-District, both deaths, neither heard of until after death, and nothing could then be made out to account for either of them. In the next two Quarters we had 15 cases in the East, and 13 in the West. Of these 28 cases, the only ones which seemed to be in any way connected were the following. Four cases in one house in Mary Ann Street, mother and three children, in great poverty, all ill within a few days of each other, no cause made out. Two cases from the East, and one from the West, were employed at the same works where the privies emptied into a large cesspit, and where about 30 of the men had suffered more or less from Diarrhæal disease. Two other cases were a brother and sister at a house in Brickkiln Place, here an old rain water downspout went directly into the sewer, and was broken short off by the front door, nothing else was made out. The remaining 19 cases appeared quite isolated ones; if we except one, where it was said that a family who used the same closet had had Typhoid Fever three or four weeks previously, but we could not confirm this. The only others in which a possible source could be detected were, one case in Sidney Street, where well water was used and found contaminated with sewage, and the cellar drain was untrapped; a case in Commercial Road where a drain was untrapped close to the back door; a case where the water drunk at the works was liable to be mixed with canal water through defective pipe arrangements; and a case where a child's illness was attributed to drinking some dirty brook water in the country.

No doubt both the Diphtheria and Typhoid Fever were aggravated by the extreme dryness of the weather, which must have made drain conditions as bad as possible.

## GENERAL STATISTICS AND SANITARY CONDITION.

In comparing Wolverhampton with other large towns by means of the death rates, it must be remembered that we have public institutions in the Borough unusually large in proportion to the size of the town; we have a large General Hospital, whose patients are from the country all round, and the Workhouse is for a Union of about double the population of the Borough; in the Registrar General's returns, (from which are taken the figures for table 10, except



those for the Sub-Districts) no correction is made for the Hospital ; and, as some of the large towns have no Hospital, and some have Hospitals outside their boundaries, in comparing ourselves with the average of the large towns, we are about justified in deducting the deaths of outsiders which take place in our institutions ; this is done in the rates given in the footnote to table 10. From this table we see that for the past year we compare very well with the large towns, our corrected death rates being less than their's for each Quarter ; and, even uncorrected, we are less for the year ; we see, further, that our advantage lies in the Measles and Scarlet Fever returns ; of the former the towns have, in proportion to population, more than two-and-a-half times as many deaths as Wolverhampton ; of the latter, more than double as many. Of Diarrhæa, on the contrary, they have in proportion one-fifth less deaths than we. Our advantage in Measles, as before stated, is not due to any effort, or better sanitary condition of ours ; we may, I think, take some credit for our superiority as regards Scarlet Fever ; but it is a matter for less pleasant reflection that we have an excess of Diarrhæa deaths ; for this Diarrhæa is, at least, contributed to by insanitary town conditions ; being the main cause of the greatly increased difference between the urban and rural death rates during the third and fourth Quarters, (see table 10). We see from table 9 that our Diarrhæa fatality this year has been exceptionally heavy, through not attaining the excessive height of last year, or of 1884 ; from table 3 we see its severity, in both Sub-Districts, is strictly limited to the third Quarter, in this it is markedly different from last year's epidemic, being, both in its commencement and close, about five weeks earlier ; and it is noteworthy that this year the hot weather set in earlier than usual, see table 4, and compare with same table for last year, (compared with the same months last year—June was much hotter, July rather hotter, September cooler, and October very much cooler) indeed in every respect we have had an early Autumn season, the fall of the leaf, and ripening of fruit being very soon over.

Table 9 shows the deaths from Phthisis and Chest affections are very high ; we see, from table 3, that these were both particularly fatal during the first four months, and the Chest affections (Respiratory diseases) during the last two ; and that they were both far more fatal in the East than in the West Sub-District. The direct cause of these high returns has of course been the weather, table 4 shows, during the six months in question, very intense cold, and a prevalence of spring east winds, which were very severe. And this cause has, as usual, been much more operative in the East, partly because of its more exposed aspect, partly because of its greater poverty. Cold and poverty are almost beyond the control of public sanitation, but we must not conclude that we have no power to lessen the fatalities arising from them ; cold is of course much more fatal to persons who are already in a state of defective health, than it is to the vigorous ; and our work can do much to lessen the constitutional feebleness, which renders so many easy victims to these Respiratory Diseases, by removing all things that needlessly contribute to atmospheric impurity in our town, and letting our back streets and courts have sunlight and purer air. Moreover, a portion of our work for the abatement of nuisances deals directly with causes of chest disease, for



many of the nuisances are, such as, leaking roofs, damp walls, water in cellars, &c. In connection with this I would refer to what I enlarged on in my report for 1885, that we cannot estimate our sanitary condition merely by the deaths from preventable diseases, but, if we find our death rate high from any cause, we must conclude that our power of resisting disease is low, and should seek for the cause why our health was thus defective ; for instance, if we judged of our East and West Sub-Districts this year from infectious disease only, we would conclude they were about equal, whereas the total death rates (23·5 and 17·2) show that the average individual health of the East is so much worse than that of the West—that the proportion of those who succumb to disease is much greater in the former. Similarly we must conclude from table 10, that the average health of the Borough is far below that of the Rural Districts. Furthur, I would repeat, that what must be kept in view as the primary object of sanitation is, preventing defective health, and that, the main part of what we can do towards this, especially in our inspection of nuisance work, is in trying to remove causes of air impurity. Of course our ill-health is in part due to matters little, or not at all under our control, such as the closely built condition of the old parts of the town, poverty, personal uncleanness, &c. ; and these causes will continue operative, and keep our death-rate necessarily higher than the Rural. But, in spite of diminished prosperity, we see from table 9 that our rates have decidedly improved, and this improved condition we must maintain ; to maintain it will need constant effort ; to make any advance on it will need increased effort ; indeed it is well to note that during the last few years there is not the progress there was. Some causes of air impurity (such as cesspits, middens,) are of old standing, but most (such as keeping animals, storing manure and wash, and dirtiness in general) are continually recurring ; to continue progress we must deal vigorously with the former, to prevent relapse, with the latter. In the remarks on Typhoid Fever and Diphtheria, some specimens of the defects that are being constantly attended to are given, similar matters are reported daily and dealt with. One affair is worth recording ; a peculiar odour had been noticed for some years in the cellar, and front second storey room of a house, not in the intervening shop (an open one), except occasionally when coming into it after being closed during the night. The drainage was overhauled without result ; finally, Inspector Blanton insisted that the smell was from coal-gas ; the meter was found to remain unchanged for hours, showing no escape in the house ; new connections were made with the main in the street, but the smell persisted. At length, finding the same smell was in the cellar next door, and finding that on piercing the front cellar wall, the smell was stronger, and more definitely coal-gas, it was concluded that there was a leakage in the street, conducted by the impervious surface to the wall, and passing up behind the frame-work of the shop front to the joists and floor of the room above ; on taking up the roadway an old broken main was found, which though disused had not been properly cut off ; when this was attended to the smell ceased. The filtration through the ground had disguised the characteristic odour ; some time ago a case was reported from abroad, where severe illnesses and death were due to a precisely

similar cause, except that there, the filtration had completely de-odorized the coal-gas. In our case the householder had happily avoided using the room.

During the year 2,142 notices were served for the abatement of nuisances ; 119 remained on hand from last year ; 2,002 were complied with.

*Unwholesome Food.*—1 beast, 3 calves, 2 sheep, 4 lambs, 13 pigs, and  $1\frac{1}{2}$  cwt. of pork have been condemned and destroyed as unfit for food ; of these notice was given. One calf, and 2 sheep were seized by our Inspector and destroyed under Magistrates' orders.

*Disinfection.*—82 houses and 3 schools have been disinfected with sulphur fumes ; 1,441 articles of clothing have been disinfected at the Borough stove.

## EXPLANATORY REMARKS ON THE TABLES.

The returns made by the Registrar for the East Sub-District include all deaths occurring in the General Hospital and Workhouse ; many of these are from outside the Borough, others from the West Sub-District, and others are returned as “ no home ” ; the particulars of these cases are all entered in table 7. In all the tables for the Sub-Districts the deaths are referred to where they belong, and in all the tables only cases belonging to the Borough are entered for the last three years, except in table 9, where the Borough totals include “ no homes ” in order to compare with former years ; in table 8 the comparison between the Sub-Districts in all years before 1884 is misleading, as the East deaths include many really belonging to the West.

The populations of the Borough and of each Sub-District being estimated separately, the former is not the sum of the latter.

## INDEX OF TABLES.

- Table No. 1.—Cases of Infectious diseases heard of during the year.
- „ „ 2.—Weekly Returns of births and deaths.
- „ „ 3.—Weekly Returns of deaths from various diseases.
- „ „ 4.—Weekly Meteorological Returns.
- „ „ 5.—Quarterly Returns of Deaths in the East Sub-District classified according to ages and diseases.
- „ „ 6.—Ditto, ditto, in the West Sub-District.
- „ „ 7.—Deaths during the year in the Borough, classified according to diseases, ages, and localities.
- „ „ 8.—Comparative Deaths and Death-rates of the East and West Sub-Districts for the past 15 years.
- „ „ 9.—Quarterly and Annual Returns of deaths from various diseases, &c., in the Borough during the past 11 years.
- „ „ 10.—Various Quarterly Returns during the year 1887, instituting a comparison between Wolverhampton and other Districts.

Area of the Borough, 3,440 acres.

Population 1881 (census April), 75,766.



TABLE No. 1.

Cases of Infectious disease heard of during 1887.

	EAST SUB-DISTRICT, POPULATION 39,101.					WEST SUB-DISTRICT, POPULATION 41,917.					BOROUGH, POPULATION 80,847.					TOTALS.			RATE PER 10,000 of POPULATION.
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year	East Sub-district	West Sub-district	Borough	
Measles ... {	44	8	15	15	82	49	5	6	...	60	93	13	21	15	142	113	81	194	23.9
	16	2	8	5	31	15	2	2	2	21	31	4	10	7	52				
Scarlet Fever {	1	1	10	5	17	4	7	15	27	53	5	8	25	32	70	52	116	168	20.7
	...	...	27	8	35	8	9	25	21	63	8	9	52	29	98				
Diphtheria ... {	...	..	...	1	1	...	2	..	1	3	...	2	...	2	4	3	13	16	1.9
	...	...	.	2	2	...	2	8	...	10	...	2	8	2	12				
Typhoid Fever {	.	..	1	...	1	1	...	...	1	2	1	...	1	1	3	16	16	32	3.9
	...	1	7	7	15	1	1	5	7	14	1	2	12	14	29				







TABLE No. 2.  
Weekly RETURNS of BIRTHS and DEATHS during 1888.

1888.  Week ending		BIRTHS.																		DEATHS.																									
		East Sub-District.				West Sub-District.				Borough.				East Sub-District.						West Sub-District.						Borough.						In Public Institutions.													
		Males.	Females.	Total.	Rate per 1000 per annum.	Males.	Females.	Total.	Rate per 1000 per annum.	Males.	Females.	Total.	Rate per 1000 per annum.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 years	Under 1 year	Under 5 years	Uncertified.	Inquests.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 years	Under 1 year	Under 5 years	Uncertified.	Inquests.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 years	Under 1 year	Under 5 years	Uncertified.	Inquests.	Not belonging to Borough.	No Home.	Belonging to West Sub-Dist.	Total in Hospital	Total in Work-house.
January	7...	26	17	43	57.2	16	10	26	31.7	42	27	69	44.0	11	14	25	33.2	6	8	9	...	3	14	9	23	28.0	7	3	13	...	3	25	23	48	30.6	13	11	22	...	6	2	...	2	2	5
"	14...	15	11	26	34.6	16	16	32	39.0	31	27	58	37.0	15	10	25	33.2	8	5	8	...	2	8	9	17	20.7	3	6	9	...	...	23	19	42	26.8	11	11	17	...	2	4	...	1	6	2
"	21...	11	14	25	33.2	17	10	27	32.9	28	24	52	33.2	12	8	20	26.6	3	6	7	...	...	7	9	16	19.5	1	4	6	...	...	19	17	36	22.9	4	10	13	...	4	...	...	3	5	6
"	28...	13	14	27	35.9	14	11	25	30.5	27	25	52	33.2	13	7	20	26.6	1	4	7	...	2	16	11	27	32.9	8	9	10	...	3	29	18	47	30.0	9	13	7	...	5	3	...	2	5	4
February	4...	13	7	20	26.6	11	13	24	29.2	24	20	44	28.1	12	7	19	25.3	6	5	8	...	...	9	8	17	20.7	6	7	7	...	2	21	15	36	22.9	12	12	15	...	2	5	...	4	3	4
"	11...	10	17	27	35.9	13	13	26	31.7	23	30	53	33.8	5	11	16	21.3	7	4	4	...	3	12	15	27	32.9	9	6	11	...	1	17	26	43	27.4	16	10	15	...	4	2	...	4	4	3
"	18...	8	12	20	26.6	13	11	24	29.2	21	23	44	28.1	13	12	25	33.2	4	5	12	1	3	9	8	17	20.7	9	5	5	...	1	22	20	42	26.8	13	10	17	1	4	5	...	...	6	5
"	25...	11	13	24	31.9	10	15	25	30.5	21	28	49	31.2	12	10	22	29.2	5	5	8	...	3	5	3	8	9.7	...	3	5	...	...	17	13	30	19.1	5	8	13	...	3	3	...	...	1	4
March	3...	19	17	36	47.9	15	9	24	29.2	34	26	60	38.3	6	7	13	17.3	2	5	10	...	2	12	7	19	23.1	9	1	6	...	2	18	14	32	20.4	11	6	16	...	4	3	...	2	1	4
"	10...	14	10	24	31.9	7	11	18	21.9	21	21	42	26.8	13	7	20	26.6	9	5	6	...	1	7	8	15	18.3	4	4	8	2	...	20	15	35	22.3	13	9	14	2	1	6	...	1	7	3
"	17...	18	20	38	50.6	9	14	23	28.0	27	34	61	38.6	7	6	13	17.3	4	2	4	1	2	7	5	12	14.6	4	4	5	...	1	14	11	25	15.9	8	6	9	1	3	...	...	2	3	4
"	24...	11	11	22	29.2	15	11	26	31.7	26	22	48	30.6	6	6	12	15.9	1	3	7	...	1	14	4	18	21.9	3	5	7	...	1	20	10	30	19.1	4	8	14	...	2	...	...	2	3	4
"	31...	12	8	20	26.6	13	8	21	25.6	25	16	41	26.1	7	10	17	22.6	3	3	5	...	1	8	7	15	18.3	5	1	4	...	...	15	17	32	20.4	8	4	9	...	1	2	...	2	3	3
1st Quarter	...	181	171	352	36.0	169	152	321	30.1	350	323	673	38.0	132	115	247	25.3	59	60	95	2	23	128	103	231	21.6	68	58	96	2	14	260	218	478	23.4	127	118	191	4	37	41	...	18	43	51
April	7...	8	16	24	31.9	13	15	28	34.1	21	31	52	33.2	11	3	14	18.6	1	5	6	...	...	5	7	12	14.6	7	1	2	...	...	16	10	26	16.6	8	6	8	...	...	1	1	2	2	4
"	14...	18	21	39	51.9	10	14	24	29.2	28	35	63	40.2	12	10	22	29.2	4	7	11	1	1	15	7	22	26.8	4	7	9	1	1	27	17	44	28.1	8	14	20	2	2	3	...	1	5	2
"	21...	15	17	32	42.6	10	14	24	29.2	25	31	56	35.7	14	3	17	22.6	3	6	8	1	1	8	5	13	15.8	4	4	6	...	2	22	8	30	19.1	7	10	14	1	3	4	...	...	4	1
"	28...	16	19	35	46.6	8	16	24	29.2	24	35	59	37.6	11	13	24	31.9	7	8	11	1	2	4	6	10	12.2	4	1	3	...	...	15	19	34	21.7	11	9	14	1	2	3	1	...	5	...
May	5...	13	18	31	41.2	15	13	28	34.1	28	31	59	37.6	10	6	16	21.3	2	7	10	...	1	7	8	15	18.3	6	1	2	...	...	17	14	31	19.7	8	8	12	...	1	3	...	...	2	3
"	12...	14	15	29	38.6	18	9	27	32.9	32	24	56	35.7	9	8	17	22.6	5	1	5	...	4	12	4	16	19.5	5	4	5	...	...	21	12	33	21.0	10	5	10	...	4	3	...	...	1	5
"	19...	10	15	25	33.2	15	13	28	34.1	25	28	53	33.8	11	8	19	25.3	6	4	9	...	2	8	7	15	18.3	2	5	6	2	2	19	15	34	21.7	8	9	15	2	4	4	...	...	2	3
"	26...	12	13	25	33.2	12	13	25	30.5	24	26	50	31.9	7	8	15	19.9	3	2	9	1	1	7	4	11	13.4	5	2	4	...	1	14	12	26	16.6	8	4	13	1	2	1	...	1	2	
June	2...																																												













# TABLE No. 4.

## WEEKLY METEOROLOGICAL REPORT.

From observations taken at the Park Meteorological Station at 9 a.m. daily.

(Height above Sea Level, 430.25 feet. Receiving surface of rain gauge 1ft. above ground.)

Week ending		Barometer uncorrected.			Average Humidity.	Temperature.					Rain.	Wind.	
		Highest.	Lowest.	Att. Ther		Max.	Min.	Mean.	Earth.			Prevailing Directions.	Total in Week.
									1-ft.	4-ft.			
1888		In.	In.	°	0—100	°	°	°	°	°	In.		Miles.
January	7th	29.850	29.150	40	95	49.5	25.0	38.4	36.0	41.5	.28	SW.	1825
"	14th	30.255	30.050	40	99	54.0	26.5	36.2	39.0	42.0	.06	SW. SW. NE.	500
"	21st	30.200	29.600	40	96	51.0	28.0	32.7	36.5	42.0	.22	NE. E. SW.	1610
"	28th	30.000	29.450	40	91	52.0	25.0	39.9	39.8	41.5	.12	W. SW. NW.	1915
February	4th	29.900	28.900	40	92	48.0	18.0	34.8	35.8	41.5	.23	W. NE. W.	1085
"	11th	29.900	29.200	40	88	49.0	30.0	41.3	39.6	41.0	.23	SW. W. NW.	1602
"	18th	29.800	29.050	40	91	40.0	17.0	29.2	36.8	41.0	.19	W. NE. N.	1448
"	25th	29.650	29.150	40	90	37.0	22.0	29.3	35.4	40.5	.39	NE.	2175
March	3rd	30.050	29.600	35	88	39.0	16.5	29.3	35.1	40.0	.18	NE. NE. N.	1680
"	10th	29.600	28.880	40	85	55.5	26.5	41.6	38.8	40.0	.58	N. W. W. SW.	2040
"	17th	29.450	28.450	40	95	46.5	25.5	34.1	39.9	41.0	.62	N. SW. E.	1710
"	24th	29.900	29.000	40	87	51.0	24.0	32.9	38.5	41.0	.31	NE. NE. W.	1525
"	31st	29.350	28.350	40	93	49.0	26.0	35.1	38.0	41.0	.97	W. NW. E.	1085
April	7th	29.850	29.350	40	84	50.0	22.0	35.1	40.0	41.0	.07	N. SW. N.	710
"	14th	29.650	29.350	40	79	56.0	26.0	40.0	41.8	41.0	.12	NE. NW.	1380
"	21st	29.475	29.150	50	87	57.0	36.0	43.9	45.6	43.0	1.39	SW. SW. NE.	1450
"	28th	29.800	29.350	50	86	61.0	31.0	39.9	44.3	44.0	.32	NE. NE. NW.	2295
May	5th	29.850	28.850	50	77	57.0	36.0	44.7	46.3	45.5	.22	SW. SW. NW.	2190
"	12th	30.050	29.850	55	80	66.0	32.0	48.0	49.1	45.5	.05	SW. W. N.	1020
"	19th	29.850	29.100	55	78	75.0	35.0	49.9	50.7	46.7	.21	NW. SW. SW.	1680
"	26th	30.080	29.700	60	70	69.0	35.0	50.0	54.2	48.0	—	W. NE. NE.	1055
June	2nd	29.850	29.220	60	78	70.5	40.0	49.5	53.3	48.5	.29	SW. SE. NE.	1525
"	9th	29.800	29.200	60	84	71.0	41.0	52.2	54.2	49.5	.85	SW. NE. SW.	1315
"	16th	29.750	29.350	60	74	66.0	41.0	51.5	55.3	50.0	.24	SW. NW.	855
"	23rd	29.875	29.650	60	83	68.0	37.0	51.4	56.2	52.0	.40	NE.	1405
"	30th	29.800	29.200	60	84	80.0	45.0	57.4	59.7	53.0	.62	E. SW. N.	1155
July	7th	29.650	29.100	60	87	69.0	43.5	52.9	58.0	53.0	1.44	SW. W. NE.	1290
"	14th	29.750	29.400	60	85	67.0	36.5	51.3	56.1	53.5	.97	SW. N. W. N.	1255
"	21st	29.500	29.100	60	93	71.0	48.5	56.7	58.3	54.0	1.94	E. NE. S. W.	680
"	28th	29.450	29.200	60	85	66.0	46.0	55.8	58.5	54.0	1.33	SW.	1535
August	4th	29.850	29.170	60	86	67.0	41.0	51.9	57.1	54.5	.75	NE S. W.	760
"	11th	29.800	29.450	60	86	80.0	45.0	59.9	59.5	54.5	.17	SW. N. W.	860
"	18th	29.900	29.400	60	74	68.0	38.5	51.7	58.9	55.5	.14	W. N. NE.	880
"	25th	29.850	29.300	60	88	68.0	44.0	55.6	58.5	55.5	.76	SW. W. SW.	1090
September	1st	29.950	29.450	60	85	68.0	43.0	52.9	57.4	55.0	2.43	SW. SW. W.	1305
"	8th	30.050	29.600	60	89	70.0	37.0	53.8	57.3	55.0	.89	SW. NW.	765
"	15th	30.100	29.800	60	85	66.0	35.0	50.9	55.0	55.0	.02	N. W. E.	718
"	22nd	30.000	29.800	60	89	65.5	40.0	52.4	55.8	54.5	—	NE. N. E.	617
"	29th	29.900	29.450	60	92	64.0	32.0	48.6	53.7	54.5	.08	NE.	815
October	6th	29.450	29.000	60	80	52.0	27.5	40.0	49.5	53.0	.38	NW.	685
"	13th	29.850	29.550	60	89	57.5	26.0	43.4	47.8	51.5	—	NW. W. N.	552
"	20th	30.000	29.800	55	90	57.0	26.5	41.6	46.6	51.0	—	W. SE.	578
"	27th	30.050	29.550	55	91	64.0	29.0	46.8	46.2	50.0	.02	E. SW. SW.	1435
November	3rd	29.800	29.150	55	93	63.0	40.0	47.6	49.6	49.5	1.05	SW E.	1490
"	10th	29.500	29.400	50	91	51.0	30.5	39.6	45.1	49.0	1.20	SE. E.	2195
"	17th	29.600	29.050	50	93	58.0	36.0	47.5	46.2	48.5	1.20	SE. SW. SW.	2095
"	24th	29.750	29.400	50	83	54.0	35.0	46.7	46.5	48.0	.30	W.	2930
December	1st	29.400	28.600	45	91	54.0	30.3	42.5	45.3	48.0	.86	SW. SW. E.	1556
"	8th	29.726	29.420	45	93	57.0	38.2	48.2	46.7	47.5	.42	SW.	1704
"	15th	29.950	29.800	45	94	44.0	27.0	33.7	42.2	47.0	—	SE. S. W.	715
"	22nd	30.050	28.600	45	93	48.5	24.0	39.3	41.1	46.0	.47	SW. S.	1615
"	29th	29.500	28.500	45	93	48.5	26.0	38.9	41.8	45.0	1.65	SW. S.	1130















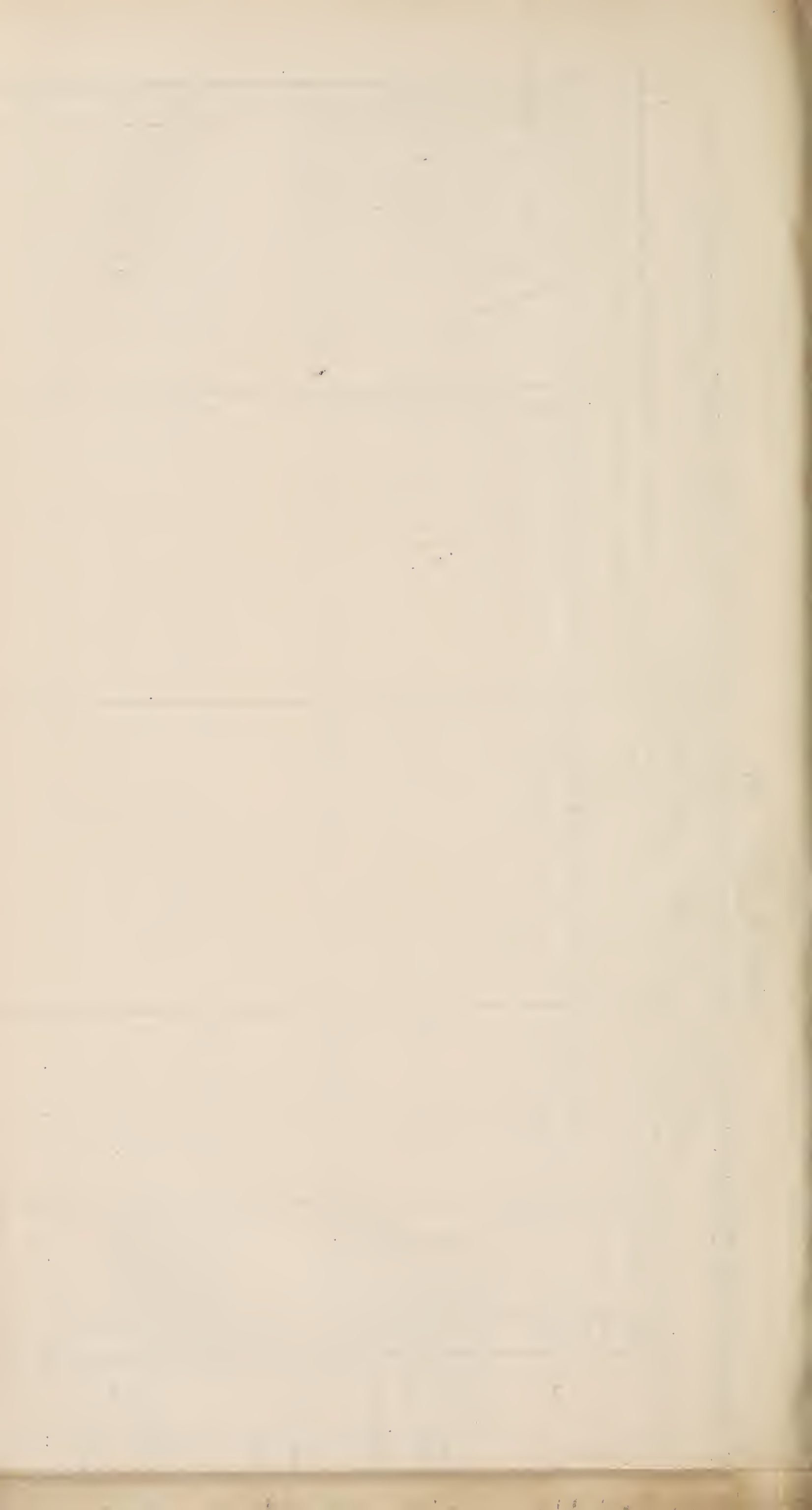




TABLE No. 7.

TABLE OF DEATHS during the Year 1888, in the Urban Sanitary District of WOLVERHAMPTON; classified according to DISEASES, AGES, and LOCALITIES, showing also the Population of such Localities, and the Births therein during the Year, and the proportion of Deaths which occurred in Public Institutions.

NAMES OF LOCALITIES adopted for the purpose of these Statistics.	Population at all Ages.		Registered Births.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																		
	Census, 1881.	Estimated to middle of 1888.		At all Ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and upwards.		Measles.	Scarlatina.	Diphtheria.	Croup (not spasmodic).	Whooping Cough.	Cont'n'd Fevers			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.
1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	20	21	22	24	25	26	27	28	29	30	31	32	33
East Sub-District ... ..	38,610	39,180	1,408	812	254	114	31	35	202	176	{ Under 5	12	4	3	11	23	1	...	24	...	1	...	...	...	16	100	1	6	166
											{ 5 upwards	...	1	...	1	1	4	1	6	...	1	2	1	1	63	97	38	23	204
West Sub-District ... ..	37,156	42,750	1,266	768	188	123	34	27	173	223	{ Under 5	26	10	3	2	32	1	...	28	...	2	...	...	...	4	71	...	4	128
											{ 5 upwards	1	2	4	4	2	5	...	2	2	2	1	...	...	58	93	38	16	227
TOTAL IN BOROUGH ... ..	75,766	81,692	2,674	1,580	442	237	65	62	375	399	{ Under 5	38	14	6	13	55	2	...	52	...	3	...	...	...	20	171	1	10	294
											{ 5 upwards	1	3	4	5	3	9	1	8	2	3	3	1	1	121	190	76	39	431
General Hospital ... ..	...	...	...	147	6	13	18	11	77	22	{ Under 5	...	.	1	...	...	...	...	..	...	...	...	...	...	...	3	..	9	6
											{ 5 upwards	...	...	2	...	...	2	...	...	3	2	1	...	1	2	24	17	30	44
Workhouse ... ..	...	...	...	148	13	5	4	6	34	86	{ Under 5	...	...	...	...	...	..	...	...	...	...	...	...	...	5	5	...	...	8
											{ 5 upwards	...	...	..	...	..	1	..	1	...	...	1	...	...	19	10	10	1	87
Deaths occurring in public institutions in the East Sub-District and not belonging to the Borough	...	...	...	117	5	9	11	6	40	46	{ Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	3	4	...	4	3
											{ 5 upwards	...	...	1	...	...	1	...	...	2	1	1	...	..	4	13	12	14	54
Deaths occurring in public institutions in the East Sub-District and entered as 'no home'	...	...	...	15	3	...	1	...	4	7	{ Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2
											{ 5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	1	...	7
Deaths occurring in public institutions in the East Sub-District and belonging to the West Sub-District	...	...	...	61	4	4	4	1	27	21	{ Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	3	3
											{ 5 upwards	...	...	1	...	...	...	...	...	1	...	...	...	...	4	9	5	8	25





**TABLE No. 8**  
**COMPARATIVE DEATHS & DEATH RATES** of the East & West  
Sub-districts for the past Fifteen Years.

Year.	EAST SUB-DISTRICT		WEST SUB-DISTRICT		BOROUGH.		Estimated population at the middle of the year.		
	Number of Deaths	Rate per 1000	Number of Deaths	Rate per 1,000	Number of Deaths	Rate per 1000	East	West	Borough
1873	1,125	29·7	631	19·8	1,756	25·1	38,010	31,831	69,906
1874	1,048	27·6	627	19·3	1,675	23·6	38,087	32,463	70,636
1875	1,155	30·3	640	19·3	1,795	25·2	38,163	33,108	71,373
* 1876	1,099	28·2	655	19	1,754	23·9	38,241	33,766	72,118
1877	1,157	30·2	611	17·8	1,768	24·3	38,318	34,436	72,871
1878	1,081	28·2	644	18·4	1,725	23·4	38,396	35,119	73,632
1879	1,093	28·5	608	17	1,701	22·9	38,474	35,817	74,402
1880	960	24·9	629	17·2	1,589	21·1	38,552	36,528	75,178
* 1881	998	25·9	650	17·5	1,648	21·3	38,629	37,253	75,963
1882	1,056	27·3	657	17·3	1,713	22·3	38,708	37,993	76,756
1883	1,042	26·9	601	15·5	1,643	21·2	38,786	38,748	77,557
1884	1,158 954	29·8 24·6	699 753	17·7 19·1	1,857 1,707	23·7 21·8	38,864	39,516	78,367
* 1885	1,012 813	25·5 20·5	658 720	16 17·5	1,670 1,533	20·7 19·0	38,943	40,301	79,185
1886	1,125 933	28·9 23·9	697 746	17 18·2	1,822 1,679	22·8 21·0	39,022	41,101	80,012
1887	1,133 918	29·0 23·5	659 720	15·7 17·2	1,792 1,638	22·2 20·3	39,101	41,917	80,847

\* These years contained 53 weeks.





TABLE No. 9.

	Quarters ending				1878	Quarters ending				1879	Quarters ending				1880	Quarters ending				1881	Quarters ending				1882	Quarters ending				1883†	Quarters ending				1884	Quarters ending				1885	Quarters ending				1886	Quarters ending				1887	Quarters ending				1888		
	30/3	29/6	28/9	28/12		29/3	28/6	27/9	27/12		27/3	26/6	25/9	25/12		26/3	25/6	24/9	31/12*		1/4	1/7	30/9	30/12		31/3	30/6	29/9	29/12		29/3	28/6	27/9	27/12		31/3	27/6	26/9	2/1*		3/4	3/7	2/10	1/1		2/4	2/7	30/9	31/12		31/3	30/6	29/9	29/12			
Small Pox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	3	4	1	2	1	3	7	3	1	..	1	5	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	1.6								
Measles ... ..	2	..	...	7	9	21	27	3	1	52	...	2	1	3	6	1	...	...	...	1	18	41	2	4	65	...	..	...	...	...	11	66	20	1	98	1	...	...	..	1	...	..	8	103	111	19	4	7	1	31	9	6	5	19	39	37.4	
Scarlet Fever ... ..	20	11	4	5	40	1	5	4	7	17	5	12	7	15	39	18	30	10	6	64	9	9	5	4	27	4	11	3	6	24	6	7	20	4	37	17	14	9	6	46	1	3	1	..	5	2	1	5	8	16	8	4	4	1	17	31.5	
Whooping Cough .. ..	32	39	14	11	96	3	5	4	5	17	10	21	8	6	45	8	6	14	15	43	36	18	1	3	58	15	6	...	...	21	1	1	3	10	15	27	7	4	3	41	2	8	6	6	22	6	1	7	15	29	29	14	11	4	58	38.7	
Diphtheria] ... ..	3	...	...	2	5	2	3	1	...	6	1	...	1	2	4	...	1	1	2	4	...	1	...	...	1	4	...	...	...	4	3	...	2	1	6	5	...	1	4	10	6	3	...	1	10	...	3	1	3	7	4	4	1	1	10	5.7	
Typhoid Fever... ..	2	5	6	6	19	1	2	2	1	6	8	1	...	7	16	3	2	5	2	12	1	2	2	2	7	2	4	2	2	10	3	...	1	5	9	2	1	...	1	4	3	1	1	4	9	1	2	5	6	14	2	5	2	2	11	10.6	
Diarrhœa ... ..	6	9	68	10	93	11	6	18	13	48	10	3	75	23	111	1	8	27	10	46	15	7	56	9	87	7	4	29	16	56	4	8	113	15	140	4	6	26	14	50	6	10	98	35	149	6	4	90	5	105	4	7	30	19	60	88.5	
Phthisis and Chest Affections...	...	117	96	58	162	433	186	163	64	185	598	133	115	81	104	433	156	119	78	110	463	147	119	83	108	457	163	114	83	115	475	120	142	89	146	497	157	113	75	149	494	159	100	76	145	480	169	119	75	146	509	184	134	94	143	555	483.9
Total Deaths belonging to Borough† ...	438	381	357	424	1600	469	408	271	415	1565	355	353	418	367	1493	440	400	341	371	1552	464	422	385	363	1634	468	372	341	361	1542	349	457	497	431	1734	466	369	312	417	1564	446	342	382	531	1701	447	394	417	406	1664	478	395	335	387	1595	1604.9	
Rate per 1000 per annum ... ..	23.8	20.7	19.4	23.1	21.8	25.3	22.0	14.6	22.3	21.1	18.9	18.8	22.3	19.5	19.9	23.2	21.1	18.0	18.2	20.1	24.2	22.0	20.1	18.9	21.3	24.2	19.2	17.6	18.6	19.9	17.8	23.4	25.4	22.0	22.2	23.6	18.7	15.8	19.6	19.4	22.3	17.1	19.1	26.6	21.3	22.1	19.5	20.7	20.1	20.6	23.4	19.4	16.4	19.0	19.5	20.76	
Zymotic Deaths ... ..	74	70	97	44	285	42	51	36	33	162	29	43	100	57	229	35	53	60	38	186	82	82	81	33	278	37	33	41	32	143	37	91	163	45	336	64	31	45	36	176	27	32	121	158	338	39	20	122	43	224	61	45	56	54	216	235.7	
Rate per 1000 per annum .. ..	4.0	3.8	5.2	2.3	3.8	2.2	2.7	1.9	1.7	6.1	1.5	2.2	5.3	3.0	3.0	1.8	2.8	3.1	1.8	2.4	4.2	4.2	4.2	1.7	3.6	1.9	1.7	2.1	1.6	1.8	1.8	4.6	8.3	2.3	4.3	3.2	1.5	2.2	1.6	2.1	1.3	1.6	6.0	7.9	4.2	1.9	0.9	6.0	2.1	2.7	2.9	2.2	2.7	2.6	2.6	3.40	
Total Deaths Registered ... ..	470	407	380	468	1725	520	436	299	446	1701	382	376	436	395	1589	478	419	362	389	1648	485	433	402	393	1713	498	410	358	377	1643	385	488	522	462	1857	501	394	335	440	1670	478	381	409	554	1822	480	424	451	438	1792	519	431	357	405	1712	1716.0	
Rate per 1000 per annum ... ..	25.6	22.1	20.7	25.5	23.5	28.0	23.5	16.1	24.0	22.9	20.3	20.0	23.2	21.0	21.2	25.2	22.1	19.1	19.0	21.3	25.3	22.6	21.0	20.5	22.3	25.7	21.2	18.5	19.5	21.2	19.7	24.9	26.7	23.6	23.7	25.3	19.9	16.9	20.7	20.7	23.9	19.1	20.5	27.8	22.8	23.8	21.0	22.2	21.7	22.2	25.4	21.1	17.5	19.8	21.2	22.18	
Sixty years of age and upwards ...	100	92	61	114	367	158	115	65	103	441	87	85	85	94	351	130	105	80	92	407	110	89	96	99	394	148	100	66	89	403	87	89	77	89	342	122	70	78	105	375	123	81	63	86	353	131	122	62	88	403	127	98	77	97	399	383.6	
Under one year of age... ..	128	97	134	129	488	110	99	82	135	426	91	101	164	103	459	100	93	107	110	410	120	115	127	71	433	109	93	118	99	419	91	113	184	118	506	85	106	83	114	388	106	95	148	140	489	98	95	171	104	468	118	102	111	111	442	448.6	
Under five years of age ... ..	211	178	202	203	794	174	178	124	197	673	144	157	228	171	700	163	164	150	176	653	223	207	180	130	740	168	145	156	147	616	131	227	289	190	837	164	154	115	165	598	162	146	221	305	834	181	134	235	188	738	191	165	148	175	679	718.3	
Deaths in Workhouse... ..	49	41	23	54	167	96	50	34	33	213	29	39	33	37	138	53	40	33	45	171	43	28	52	50	173	78	65	37	48	228	36	39	32	45	152	65	47	32	42	186	59	37	36	40	172	39	55	49	44	187	51	32	40	25	148	Annual Averages for the Ten preceding years	
Deaths in Hospital ... ..	38	21	14	35	108	35	21	24	40	120	23	22	18	28	91	32	24	27	18	101	27	19	19	28	93	34	29	21	17	101	41	39	25	30	135	50	33	26	27	136	27	45	30	27	129	44	29	37	32	142	43	49	26	29	147		
Inquests ... ..	20	17	18	18	73	26	20	22	20	88	23	20	21	24	88	20	13	29	19	81	33	19	13	32	97	28	21	20	19																												

† These include returns made as "no home."

\* These Quarters contained 14 weeks, and the Years 53.

† After this year only deaths belonging to the Borough are included under the diseases and the different ages.





TABLE NO. 10.

TWENTY-SEVEN LARGE TOWNS POPULATION 5,028,907.					WOLVERHAMPTON, POPULATION 80,847.			
					1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
Total Number of Deaths...	...	...	...	...	473	413	440	420
Rate per 1000 per annum of Total Deaths	...	...	...	...	23·5	20·5	21·8	20·9
” of Zymotic Deaths	...	...	...	...	1·6	0·7	5·8	1·8
Deaths from Zymotics ...	...	...	...	...	33	15	117	37
” Measles ...	...	...	...	...	17	3	6	1
” Scarlet Fever ...	...	...	...	...	2	1	5	8
” Diarrhoea ...	...	...	...	...	5	4	93	4
Rate per cent. of uncertified deaths	...	...	...	...	2·1	1·2	1·8	1·0
Deaths under 1 year of age per 1000 Births	...	...	...	...	143	144	262	152
EAST SUB-DISTRICT, POPULATION 39,101.					WEST SUB-DISTRICT, POPULATION 41,917.			
Total Number of Deaths	...	...	...	...	176	190	172	182
Rate per 1000 per annum of Total Deaths	...	...	...	...	16·8	18·1	16·4	17·4
” of Zymotic Deaths	...	...	...	...	1·7	0·9	4·5	2·4
Deaths from Zymotics ...	...	...	...	...	18	10	48	26
” Measles ...	...	...	...	...	11	1	1	..
” Scarlet Fever ...	...	...	...	...	1	1	2	7
” Diarrhoea ...	...	...	...	...	3	3	33	2
Death rate per 1000 per annum, England and Wales	...	...	...	...	20·6	18·2	17·6	18·1
” Urban Districts ...	...	...	...	...	21·0	18·8	18·9	19·8
” Rural Districts ...	...	...	...	...	19·8	17·2	15·2	16·9

The above returns for Wolverhampton are taken from the Registrar General's and include deaths not belonging to it; our rates for the quarters are at most 22·1, 19·5, 20·7, and 20·1; these include deaths returned as no home.

